

Listing of Claims

1. (Currently Amended) A viewing system (150), comprising acquisition means (151) for acquiring a sequence of images (IS), detection means (20) for detecting an object of interest (2, 17) in said sequence of images (IS), said detection means (20) comprising:
 - localizer detection sub-means (30) for detecting a location (L_1, L_2) of localizers related to said object of interest,
 - border detection sub-means (60) for detecting a location of borders (BL) related to said object of interest, using said location of localizers,
and viewing means (154) for displaying said sequence of images (IS).
2. (Currently Amended) A viewing system (150)-as claimed in claim 1, wherein said border detection sub-means (60) comprise:
 - initialization sub-means (61) for building an initial contour (EIC, RIC) of said borders, containing said localizers (L_1, L_2), from a priori knowledge about said object of interest,
 - active contour sub-means (62) for moving said initial contour (EIC, RIC) under the effect of forces related to said object of interest (2, 17)-within said sequence of images (IS).
3. (Currently Amended) A viewing system (150)-as claimed in claim 1-~~or~~-2, comprising enhancement means (70) for enhancing said borders using said location of borders (BL)-and delivering a sequence of enhanced images (EIS).
4. (Currently Amended) A viewing system (150)-as claimed in claim 1-~~or~~-2, comprising measurement means (71) for measuring characteristics (CM) of said object of interest using said location of borders (BL).
5. (Currently Amended) A viewing system (150)-as claimed in claim 4, wherein said characteristics (CM)-are widths of said object of interest along a length of said object of interest.

6. (Currently Amended) A viewing system as claimed in claim 1-~~or~~², wherein said acquisition means (~~151~~) are able to acquire at least two views of said object of interest, said viewing system also comprising 3D representation means (~~72~~) for delivering a 3D representation (~~3DR~~) of said object of interest from said views and said location of borders (~~BL~~).
7. (Currently Amended) A viewing system as claimed in claim 6, wherein a cylindrical model is used by said 3D representation means (~~72~~) when said object of interest has a tubular shape.
8. (Currently Amended) A viewing system as claimed in ~~one of claims 1 to 7~~, wherein said object of interest is a stenosis (~~2~~) or a stent (~~17~~) and said localizers are a tip (~~9~~) or balloon markers (~~13, 14~~).
9. (Currently Amended) A viewing system as claimed in claim 3, wherein said viewing means (~~154~~) also comprise local registering means (~~80~~) for registering a sequence of reference images (~~RIS(n)~~) with respect to said sequence of enhanced images (~~EIS, EIS(t)~~) so as to form a new sequence of enhanced images (~~NEIS(t)~~), in which said sequence of enhanced images and said sequence of reference images are combined.
10. (Currently Amended) A viewing system as claimed in claim 3, wherein said viewing means (~~154~~) also comprise local registering means (~~80~~) for registering said sequence of enhanced images (~~EIS, EIS(t)~~) with respect to a sequence of reference images (~~RIS(n)~~) so as to form a new sequence of reference images (~~NRIS(n)~~), in which said sequence of enhanced images and said sequence of reference images are combined.
11. (Currently Amended) A method, comprising a detection step (~~20~~) for detecting an object of interest in a sequence of images (~~IS~~), said detection step comprising sub-steps of:

- localizer detection (30) for detecting a location of localizers (L_1, L_2) related to said object of interest,
- border detection (60) for detecting a location of borders (BL) related to said object of interest, using said location of localizers.

12. (Currently Amended) A device (153) comprising detection means (20) for detecting an object of interest in a sequence of images (IS), said detection means comprising:

- localizer detection sub-means (30) for detecting a location of localizers related to said object of interest,
- border detection sub-means (60) for detecting a location of borders (BL) related to said object of interest, using said location of localizers.

13. (Original) A computer program comprising a set of instructions for implementing a method as claimed in claim 11 when said program is executed by a processor.

14. (Currently Amended) A medical examination imaging apparatus comprising a viewing system (150) as claimed in one of the claims 1 to 10.